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June 25, 2010

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Dear Ms. Dortch,

The Arizona Department of Water Resources (ADWR) appreciates this opportunity to provide comments on the FCC's proposed plans to reassign the 1675-1710 MHz band for wireless broadband services (ET Docket No. 10-123). The ADWR is concerned that the proposed reassignment of this portion of the spectrum to uses other than those already dedicated to the operation of the GOES satellite system may detrimentally impact the hydrologic data collection operations of the United States Geological Survey (USGS), the ADWR and other users of the GOES system.

As you may know the USGS operates a network of several thousand GOES-based real-time streamgages throughout the country, with 234 real-time sites within the state of Arizona. These sites provide vital hydrologic data to a large user base for a variety of purposes. ADWR believes that any impairment of this system would be a great loss to the state. ADWR also utilizes the GOES satellite system for transmitting real-time groundwater data from a network of 76 automated monitoring wells that it operates throughout the state of Arizona (see attached figure). ADWR's real-time groundwater monitoring data is used by a large user group from the hydrologic community, government agencies and the general public. Any disruption of ADWR's automated groundwater monitoring system that might be caused by the proposed changes to the GOES system would be very detrimental to the state.

ADWR has reviewed the FCC Public Notice concerning the proposed reallocation of the GOES DCS downlink frequency and offers the following responses to the nine questions posed on the website that are designed to better understand the impact of potential changes in the GOES spectrum allocation:

Question 1. ADWR uses a DOMSAT satellite dish to downlink re-broadcasted 1675 to 1710 MHz GOES data from the NOAA Wallops Island facility. ADWR has operated with this system for several years and has experienced a reasonable degree of reliability during the time the system has operated. Failures experienced with this system have generally resulted from other users

inadvertently "stepping on" ADWR transmissions. ADWR would be concerned if any of the proposed changes would lessen the reliability of this portion of the system.

Question 2. Other than itself, ADWR is not aware of other non-federal users of the 1675-1710 MHz band. However, ADWR assumes there are many such users nationwide.

Question 3. ADWR's use of this band is for the downlink of re-broadcasted GOES data from the NOAA Wallops Island Facility to a DOMSAT satellite dish located in the central Phoenix area.

Question 4. It is our understanding that the downlinked signal has a bandwidth of 1683 to 1695 MHz and the signal frequency is 1689 MHz.

Question 5. ADWR currently utilizes 400 MHz GOES radio transmitters located at each groundwater monitoring location to transmit real-time groundwater data that are collected four times per day (12AM, 6AM, 12PM and 6PM). Please note that there are well sites where ADWR collects data that are not covered by cell phone service, and real-time data collection and reporting can only be accomplished with satellite radio telemetry.

Question 6. ADWR's investment in GOES radio equipment for automated sites, the DOMSAT radio dish, PC server and related is in the range of $300K.

Question 7. ADWR is uncertain what the full scope of the proposed changes would mean to its automated groundwater monitoring network. If the proposed changes would only impact ADWR's ability to downlink its data with the DOMSAT dish, it could potentially go to an Internet system. However, ADWR does not know what it would really take in terms of time, money and other resources to make such a system actually work. But, it would potentially be in the several thousand dollar range.

If the proposed changes had much deeper effect, which ADWR does not feel it has the expertise to properly evaluate at this time, and its entire radio transmitter inventory required replacing it would take 1 to 2 thousand man-hours and probably several hundred thousand dollars to accomplish.

Question 8. Alternative means to receive information from terrestrial services would probably be functionally equivalent to the current system. And for some users, such alternatives may be a more desirable way to obtain their data. However, this can not be determined for certain until such services would be described in more detail. Also, please note that ADWR, and probably other similar users have significant investments in customized downloading scripts and programs for the DOMSAT system and these would undoubtedly have to be re-created for an Internet service. Additionally, after the initial cost of purchasing the DOMSAT dish, aligning it to the satellite, and writing downloading scripts and software ADWR has had no additional expense to download its data for several years, which wouldn't be the case with an Internet system.

Question 9. ADWR has no other information to add concerning the use of meteorological satellite and radiosonde services at this time. However, we would like to conclude our remarks by saying that we realize that we are not experts in the field of the satellite systems or radio telemetry, and we therefore must rely on the good judgment and knowledge of others to fully assess the potential impacts to our system. That said, ADWR is not opposed to changes that benefit all potential users of the system, however it cannot support changes that would ultimately cost time or money to adapt to, because we have no extra funds or extra staff-time to spare. Nor do we support changes that would otherwise degrade the Nation's vital scientific data collection

system. In closing, ADWR appreciates this opportunity to provide comments to the FCC on this matter of vital national interest.

Sincerely,

Karen L. Smith
Deputy Director
Arizona Department of Water Resources